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PTO/SB/61 (07-06)

Approved for use through 09/30/2006. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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**PETITION FOR REVIVAL OF AN APPLICATION FOR PATENT  
ABANDONED UNAVOIDABLY UNDER 37 CFR 1.137(a)**

Docket Number (Optional)

First Named Inventor: EUGENE MATZEN

Art Unit: 3617

Application Number: 10/772,535

Examiner: FRANZ JULES

Filed: 02/06/2004

Title: SYSTEM FOR DETECTION OF DEFECTS  
IN RAILROAD CAR WHEELS

Attention: Office of Petitions  
Mail Stop Petition  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

NOTE: If information or assistance is needed in completing this form, please contact  
Petitions Information at (571) 272-3282.

The above-identified application became abandoned for failure to file a timely and proper reply to a notice or action by the United States Patent and Trademark Office. The date of abandonment is the day after the expiration date of the period set for reply in the Office notice or action plus any extensions of time actually obtained.

**APPLICANT HEREBY PETITIONS FOR REVIVAL OF THIS APPLICATION.**

NOTE: A grantable petition requires the following items:

- (1) Petition fee.
- (2) Reply and/or issue fee.
- (3) Terminal disclaimer with disclaimer fee-required for all utility and plant applications filed before June 8, 1995, and for all design applications; and
- (4) Adequate showing of the cause of unavoidable delay.

**1. Petition fee**

☒ Small entity - fee \$ 250- (37 CFR 1.17(l)). Applicant claims small entity status.  
See 37 CFR 1.27.

☐ Other than small entity - fee \$ \_\_\_\_\_ (37 CFR 1.17(l)).

**2. Reply and/or fee**

A The reply and/or fee to the above-noted Office action in the form of  
AN AMENDMENT (identify the type of reply):

☒ has been filed previously on 09/06/2005

☒ is enclosed herewith.

10/24/2006 AWONDAF1 00000052 10772535

B The issue fee of \$ \_\_\_\_\_

01 FC:2452

250.00 OP

☐ has been filed previously on \_\_\_\_\_

☐ is enclosed herewith.

[Page 1 of 3]

This collection of information is required by 37 CFR 1.137(a). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 8 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop Petition, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

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**PETITION FOR REVIVAL OF AN APPLICATION FOR PATENT ABANDONED  
UNAVOIDABLY UNDER 37 CFR 1.137(a)**

**3. Terminal disclaimer with disclaimer fee**

- ☒ Since this utility/plant application was filed on or after June 8, 1995, no terminal disclaimer is required.
- ☐ A terminal disclaimer (and disclaimer fee (37 CFR 1.20(d)) of \$ \_\_\_\_\_ for a small entity or \$ \_\_\_\_\_ for other than a small entity) disclaiming the required period of time is enclosed herewith (see PTO/SB/63).

- 4. An adequate showing of the cause of the delay, and that the entire delay in filing the required reply from the due date for the reply until the filing of a grantable petition under 37 CFR 1.137(a) was unavoidable, is enclosed.**

**WARNING:**

Petitioner/applicant is cautioned to avoid submitting personal information in documents filed in a patent application that may contribute to identity theft. Personal information such as social security numbers, bank account numbers, or credit card numbers (other than a check or credit card authorization form PTO-2038 submitted for payment purposes) is never required by the USPTO to support a petition or an application. If this type of personal information is included in documents submitted to the USPTO, petitioners/applicants should consider redacting such personal information from the documents before submitting them to the USPTO. Petitioner/applicant is advised that the record of a patent application is available to the public after publication of the application (unless a non-publication request in compliance with 37 CFR 1.213(a) is made in the application) or issuance of a patent. Furthermore, the record from an abandoned application may also be available to the public if the application is referenced in a published application or an issued patent (see 37 CFR 1.14). Checks and credit card authorization forms PTO-2038 submitted for payment purposes are not retained in the application file and therefore are not publicly available.

*M. Kacher*

Signature

Date

MARTIN LUKACHER

Typed or printed name

17,788

Registration Number, if applicable

40 UPSTATE CT

Address

585/442-1442

Telephone Number

63 WINDING CREEK LANE

Address

ROCHESTER, N.Y.  
14625

Enclosure ☒ Fee Payment

☒ Reply

☐ Terminal Disclaimer Form

☒ Additional sheets containing statements establishing unavoidable delay

☐ PREVIOUS CORRESPONDENCE WITH USPTO

CONCERNING PETITION TO REVIVE RECENT

**CERTIFICATE OF MAILING OR TRANSMISSION (37 CFR 1.8(a))**

I hereby certify that this correspondence is being:

☒ deposited with the United States Postal Service on the date shown below with sufficient postage as first class mail in an envelope addressed to Mail Stop Petition, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

☐ transmitted by facsimile on the date shown below to the United States Patent and Trademark Office at (571) 273-8300.

10/19/2006

Date

*M. Kacher*

Signature

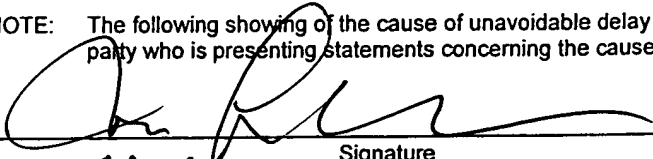
MARTIN LUKACHER

Typed or printed name of person signing certificate

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PETITION FOR REVIVAL OF AN APPLICATION FOR PATENT ABANDONED  
UNAVOIDABLY UNDER 37 CFR 1.137(a)

NOTE: The following showing of the cause of unavoidable delay must be signed by all applicants or by any other party who is presenting statements concerning the cause of delay.

  
Signature

M. LUKACHER

Typed or printed name

OCT. 19, 2006  
Date

17788

Registration Number, if applicable

(In the space provided below, please explain in detail the reasons for the delay in filing a proper reply.)

PTO DID NOT PROCESS THE AMEND-  
MENT IN RESPONSE TO AN OUTSTANDING  
ACTION. CASE WAS ABANDONED  
WITHOUT FAULT ON PART OF  
APPLICANT. CORRESPONDENCE  
WITH PTO HERETOFORE ATTEMPTING  
TO REVIVE EXPLAINS SITUATION  
FULLY AND IS ENCLOSED. PLEASE  
NOTE THERE WAS NO REPLY TO  
ANY OF THIS CORRESPONDENCE

(Please attach additional sheets if additional space is needed.)

1

*Alexander E. Martens*  
Consultant in Technology

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**U.S. Patent & Trademark Office  
Patent Examining Operations**

Re. Application No. 10/772/536  
Filed 2/6/04  
Examiner Frantz F. Jules  
Art Unit 3617  
Conf. No. 5402

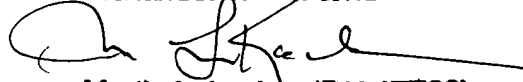
Commissioner of Patents  
PO Box 1450  
Alexandria, VA 22313-1450  
Attn: Office of Petitions

In response to a Letter of Abandonment, Martin Lukacher, Esq. and I have submitted a Petition to Revive the subject application. We are convinced that our responses to the Examiner's comments have either been lost by the Post Office or misfiled. For several weeks we tried to contact the above Examiner and were not able to because he was not currently working at the U.S. PTO facilities... After leaving several messages in the Examiner's mail box, I received a telephone call from the Examiner, who advised me to contact the Office of Petitions. I have and received a prerecorded response that instructions would be mailed in about two weeks.

Considering the length of elapsed time since our first request to the Examiner to revive the application, we are hoping that you would be able to expeditiously consider this matter and revive the application. I am enclosing the copies of the pertinent documents to support our request.

Respectfully,

Alexander E. Martens

  
Martin Lukacher (RN 17788)

Enclosures: A copy of Response of 6/25/05  
A copy of the Notice of Abandonment  
A copy of the postcard confirming delivery to the PTO

*Alexander E. Martens*  
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**U.S. Patent & Trademark Office  
Patent Examining Operations**

Re. Application No. 10/772/536  
Filed 2/6/04  
Examiner Frantz F.Jules  
Art Unit 3617  
Conf. No. 5402

Commissioner of Patents  
PO Box 1450  
Alexandria, VA 22313-1450

Follow up regarding a letter by M.L. Lukacher, Esq. (R.N. 17788) concerning a Notice of Abandonment of the subject application by Matzan, Eugene, who is a client of mine. I work with Mr. Lukacher in matters of patents.

My client and I would much appreciate if you would respond to our Petition to Revoke. Looking forward to hearing from you.

Respectfully,

Cc M.L. Lukacher.

Enclosure: A copy of Response of 6/25/05  
A copy of the Notice of Abandonment  
A copy of the postcard confirming delivery to the PTO



**US Patent & Trade Mark Office  
Patent Examining Operation**

Re. Application No. 10/772/536  
Filed 2/6/04  
Examiner Frantz F. Jules  
Art Unit 3617  
Conf. No. 5402

Response to Action of 5/15/06 and Petition to Revive

Commissioner of Patents  
PO Box 1450  
Alexandria, VA 22313-1450

Sir,

Please revive the above application since the action of 6/22/05 was responded to on 9/6/05. A copy of the Response is enclosed.

The response was apparently mishandled in the mails or at the PTO and did not reach the Examiner. Applicant was not at fault.

Respectfully,

M.L. LuKacher  
R.N. 17788

Enclosures: A copy of Response of 6/25/05  
A copy of the Notice of Abandonment

I mailed the Response & enclosure to the above address on 9/6/05 by first class mail.

M.L. Lukacher



In the U.S. Patent and Trademark Office  
Patent Examining Operation.

Applicant: Eugene Matzan  
Appl. No. 10/772,535  
Filed: 02/06/2004  
For: Systems for Detection of Defects in Railroad Car Wheels  
Examiner: Franz F. Jules  
Art Unit: 3617  
Confirmation No. 5402

To the Commissioner of Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Response to Action dated 06/22/2005

Please amend the claims as indicated on the attached listing entitled "Amended Claims".

Remarks

The rejection of claims 15 and 16 is respectfully traversed. The description and drawings fully support claims 15 and 16 where signals from the sensors are "Signal In" to the power supply as per Fig. 1 and the power supply in Fig. 4 all are fully described in the second paragraph on page 6 of the specifications.

The 35 USC 102 rejection of claims 1 and 4 is moot in that claim 1 is canceled and claim 4 as amended is dependent on claim 2,

The rejection under 35 USC 103 on Maine 4,936,529 in view of Mian 6,523,411 and Hallberg 4,702,104 is respectfully submitted to be overcome by the amendments to the claims.

Both Maine and Mian are irrelevant to the claimed invention since they relate to microwave/radio frequency detection and provide no guidance to the skilled in the art to the use of acoustical/sound vibration detectors. There is no impetus for combining these patents with Hallberg since they use different detection modalities than Hallberg uses. Thus, their combination would not suggest itself to one skilled in the art.

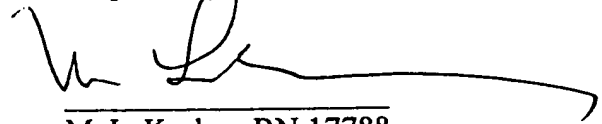
Applicant's invention provides significant patentable improvement over Hallberg in the following respects:

- a) Teaching the use of acoustically isolated rail sections
- b) Limiting the length of the sections to less than that the distance covered by half rotation of the railroad wheel

- c) Use of acoustical signals over the full range, not just the range above 100 Hz.
  - d) Using frequency domain conversion rather than a complex digital processing technique; applicant specifically uses an FFT device (claim 5) to get the spectrum
- a) and b) improves signal processing and reduces interference (see last paragraph on page 1).
- b) enables earlier detection of wheel defects—rather than relying on harmonic, which manifests defects only after they become catastrophic. Early detection enables taking the car out of service while it can still roll to the repair yard. A test can be completed before a catastrophe, which can shut down the rail line.

Since a system having the forgoing improvements is not foreshadowed by Hallberg, the invention as claimed in the amended claims, let alone the features of the dependent claims, would not have been obvious to anyone skilled in the art, the allowance of applicant's claims is believed to be in order and is respectfully solicited.

Respectfully submitted,

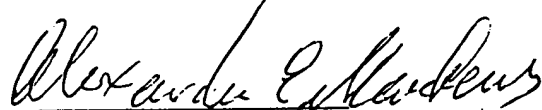


M. LuKacher, RN 17788  
Upstate CTC  
63 Winding Creek Lane  
Rochester, NY 14625

6 September 2005

Certificate of Mailing

This response was mailed to the above address by 1<sup>st</sup> class US mail on 6 September 2005 by the undersigned.



Alexander E. Martens



### Amended claims

1. (Canceled) ~~A system for detection of railroad wheel defects comprising remote rail defect monitors installed in rails over which the wheels travel, and means obtaining wheel identification and defect information from the monitors.~~
2. (Amended). A system ~~per claim 1~~ for detection of railroad wheel defects comprising remote railroad wheels defect monitors installed in rails over which the wheels travel, said remote railroad wheels defect monitors ~~comprise~~ comprising:
  - first and second acoustically isolated rail sections of length not exceeding one half the distance over which a full rotation of the railroad wheel travels, each equipped with an acoustical/vibration sensor, two for each rail, to define successive remote monitoring locations, said sensors being operative respond to sounds/vibrations generated when train wheels are rolling on said rail segments.;
  - said sensors being operative to generate specific electrical signals over the entire acoustical range of said sounds/vibrations thereby representing the nature and extent of said defects said specific electrical signals differing in their parameters from the electrical signals generated when said wheels roll over said rail sections are free from any defects; and

means to amplify said electrical signals generated by said sensors over said entire acoustical range in response to sounds and vibrations made train wheels rolling over said rails;

~~first computing means~~ and means for obtaining wheel identification and defect information from the monitors comprising first computing means to analyze said amplified electrical signals by transforming said signals from time into frequency domain and generating a signal intensity vs. frequency spectra;

second computing means to accept said spectra and compare said spectra to first reference spectra stored in said computing means to indicate the absence/presence of the wheel defects; and

means to determine the location of any detected defect in said wheels;

3. (Original) The system per claim 2 comprising means for transmitting the collected data from said computing means on the nature, the extent and the location of said defects; means for uniquely identifying the identity of the remote defect monitoring location, when said defect is first detected.
4. (Amended) A system per claim 1 2 in which said central monitoring station has means which receive the information from said remote rail defect monitors and generates reports and warnings related to the condition of said wheels.

5. (Original) A system per claim 2, in which the first computing means uses a fast Fourier transform to perform said conversion of said signals from time domain to frequency domain, thus generating sound/vibrations intensity vs. frequency spectra.
6. (Original) A system per claim 5 in which said second computing means are used to accept said spectra, compute the differences of said spectra to said first stored reference spectra and identify the nature and the extent of a defect in said wheels by comparing said difference with stored second reference spectra, said stored second reference spectra being representative of said defects in said wheels.
7. (Original) A system per claim 2 in which the functions of said first computing means is incorporated into said second computing means.
8. (Amended) A system per claim 2 in which said sensors are stationary and are attached to said rails separately in each said section.
9. (Amended) A system per claim 2 ~~3 in which said first and second sensors~~ wherein said identifying means being responsive to said electrical signals for detecting the instant when said wheels pass over the location of said sensors.

10. (Amended) A system per claim 3 wherein said identifying means include means for detecting the instant when said wheels pass the location of said sensors which include strain gauges.
11. (Amended) A system per claim 9 3 in which said identifying means include means for detecting the instant when said wheels pass over the location of said sensors which include pressure sensors.
12. (Amended) A system per claim 9 3 in which said identifying means include means for detecting the instant when said wheels pass the location of said sensors include magnetic sensors.
13. (Amended) A system per claim 8 3 wherein the identifying means ~~are provided~~ includes means responsive to said ~~sensors~~ electrical signals for counting the number of wheels passing over said rail sections.
14. (Original) A system per claim 3 in which said transmitting means transmit said collected data pertaining to detected defects to said central monitoring station.
15. (Amended) A system per claim 2, which includes power supply means ~~responsive to outputs~~ utilizing said electrical signals from said sensors for generating and storing electrical energy for operating said wheel identification and defect information obtaining means.

16. (Amended) A system per claim 15, in which said ~~outputs are~~ electrical signals generated in response to said sounds and vibrations to generate electrical current, including current stored as an electrical charge in a storage battery.
17. (Original) A system per claim 2 in which said rail sections are inserted into said rails and joined to said rails by means of a channel structures.
18. (Original) A system per claim 17 in which said channel structures contain sound isolating material that prevents the sounds from adjoining rail to be passed into said rail sections.
19. (Original) A system per claim 18 in which said channel structures are equipped with said sensors.



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/772,535	02/06/2004	Eugene Matzan		5402

7590 05/15/2006  
UPSTATE CTC  
63 WINDING CREEK LANE  
ROCHESTER, NY 14625



EXAMINER

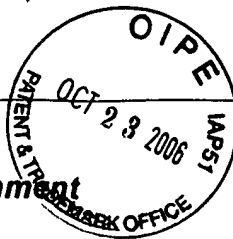
JULES, FRANTZ F

ART UNIT	PAPER NUMBER
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3617

DATE MAILED: 05/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.



# **Notice of Abandonment**

Application No.

10/772,535

Examiner

Frantz F. Jules

Applicant(s)

MATZAN, EUGENE

Art Unit

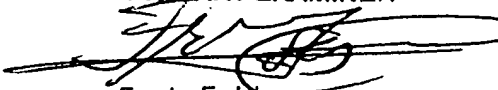
3617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

This application is abandoned in view of:

1. ☒ Applicant's failure to timely file a proper reply to the Office letter mailed on 22 June 2005.
  - (a) ☐ A reply was received on \_\_\_\_\_ (with a Certificate of Mailing or Transmission dated \_\_\_\_\_), which is after the expiration of the period for reply (including a total extension of time of \_\_\_\_\_ month(s)) which expired on \_\_\_\_\_.
  - (b) ☐ A proposed reply was received on \_\_\_\_\_, but it does not constitute a proper reply under 37 CFR 1.113 (a) to the final rejection.  
(A proper reply under 37 CFR 1.113 to a final rejection consists only of: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114).
  - (c) ☐ A reply was received on \_\_\_\_\_ but it does not constitute a proper reply, or a bona fide attempt at a proper reply, to the non-final rejection. See 37 CFR 1.85(a) and 1.111. (See explanation in box 7 below).
  - (d) ☒ No reply has been received.
2. ☐ Applicant's failure to timely pay the required issue fee and publication fee, if applicable, within the statutory period of three months from the mailing date of the Notice of Allowance (PTOL-85).
  - (a) ☐ The issue fee and publication fee, if applicable, was received on \_\_\_\_\_ (with a Certificate of Mailing or Transmission dated \_\_\_\_\_), which is after the expiration of the statutory period for payment of the issue fee (and publication fee) set in the Notice of Allowance (PTOL-85).
  - (b) ☐ The submitted fee of \$\_\_\_\_\_ is insufficient. A balance of \$\_\_\_\_\_ is due.  
The issue fee required by 37 CFR 1.18 is \$\_\_\_\_\_. The publication fee, if required by 37 CFR 1.18(d), is \$\_\_\_\_\_.
  - (c) ☐ The issue fee and publication fee, if applicable, has not been received.
3. ☐ Applicant's failure to timely file corrected drawings as required by, and within the three-month period set in, the Notice of Allowability (PTO-37).
  - (a) ☐ Proposed corrected drawings were received on \_\_\_\_\_ (with a Certificate of Mailing or Transmission dated \_\_\_\_\_), which is after the expiration of the period for reply.
  - (b) ☐ No corrected drawings have been received.
4. ☐ The letter of express abandonment which is signed by the attorney or agent of record, the assignee of the entire interest, or all of the applicants.
5. ☐ The letter of express abandonment which is signed by an attorney or agent (acting in a representative capacity under 37 CFR 1.34(a)) upon the filing of a continuing application.
6. ☐ The decision by the Board of Patent Appeals and Interference rendered on \_\_\_\_\_ and because the period for seeking court review of the decision has expired and there are no allowed claims.
7. ☐ The reason(s) below.

**FRANTZ F. JULES  
PRIMARY EXAMINER**

  
Frantz F. Jules  
Primary Examiner  
Art Unit: 3617

Petitions to revive under 37 CFR 1.137(a) or (b), or requests to withdraw the holding of abandonment under 37 CFR 1.181, should be promptly filed to minimize any negative effects on patent term.